Nov 10th, 2007 Form B

University of Jordan

King Abdullah School of Information Technology

Department of Computer Science

Computer Skills II (Scientific Faculties) / Midterm Exam

Student Name: **Section No.:**

Student ID: **Instructor.:**

Note: Answer question 1 here.

	Syntax Error	Correction
1	namespace std ;	using namespace std ;
2	Void main ();	void main ()
3	Char z;	char z;
4	if a>=b	if (a>=b)
5	for(int i=0;i<5;++)	for(int i=0;i<5;i++)
6	cin>>number	cin>>number ;
7	Else	else
8	<<number<<" Is Odd"endl;	<<number<<" Is Odd"<<endl;
9	return 0;	It should be removed because of void main()
10	No end for main function	Place } at the end of main function

Q1: Find and correct syntax error(s) in the following program. (10 points)

```
#include <iostream>
namespace std ;
void main ();
{
      int a,b,max;
      int number,x;
      double av;
      Char z;

      cout<<"Enter Two Integer Number:";
      cin>>a>>b;

      if a>=b
         max=a;
      else
         max=b;

      cout<<"Max="<<max<<endl;
      for(int i=0;i<5;++)
      {
          cout<<"Enter Integer Number:";
          cin>>number
          if(number%2==0)
                  cout<<"Number "<<number<<" Is Even"<<endl;
          Else
                  cout<<"Number "<<number<<" Is Odd"endl;
       }
       return 0;
```

Q2: What is the Output of the following Code Segments? (10 points)

```
void main()
{
    int z , y; double x;
    string str = "";
    char var;

    cin>>z>>x;
    cin.get(var);
    cin>>y;
    getline(cin,str);

    x += (str != "Computer" ? 100 : 10);
    cout<<"x  is:"<<x<<"\n"<<"y is:"<<y<<"\n"
        <<"z  is:"<<z<<"\n"<<"w is:"<<var<<"\n"
         <<"str  is:"<<str<<"\n";
}
```

Assume the input as follows:

34 2.4 19
Computer

Stored Value For Each Variable

x = 102.4
y = 19
z = 34
w = space
str = Empty String

```
void main()
{
     int x = 18 , y = 7 ;
     cout<<y<<"  "<<x--<<'\n';
     while( x  > 12 )
     {
          switch( x ) {
               case 17:
                    y++;
               case 14:
                    cout<<(y % 5)<<"  ";
               case 12:
                    cout<<--x<<"  ";
                    break;
               default:
                    y += x/2;
                    break;
          }
          cout<<x<<"\n";
          x -= 5;  }
}
```

Output

7 18
3 16 16

Q3: Write a C++ code to read a group of integer values and calculate the average of only even ones. The input should terminate at the time of input for a negative integer. (5 points)

```
#include<iostream>
using namespace std;
void main()
{
#include<iostream>
using namespace std;
void main()
{
    int val, counter = 0;
    double sum = 0 , avg;
    cout<<"Enter a value: ";
    cin>>val;
    while(val >= 0)
   {
        if(val%2 == 0){
            sum += val;
            counter++;
        }
         cout<<"Enter a value: ";
         cin>>val;
    }
    if(counter != 0)
   {    avg = sum / counter;
        cout<<avg<<'\n';
   }}
```

➔1 mark

➔1 mark

➔1 mark

➔1 mark

➔1 mark

Q4: Write a C++ code to input an integer value (assume its name is N) and calculate the summation for the first N terms of the following series: (Note: Don't use Pow function in your solution) (5 points)

$$1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \ldots.$$

```
#include<iostream>

using namespace std;

void main()

{
        double sum = 0;
        int N, x = 1;                                   ➔1 mark

        cout<<"Enter Number of terms:";
        cin>>N;                                         ➔1 mark

        for(int i = 1; i <= N ; i++)                    ➔1 mark

        {
                sum += 1 / x;
                x *= 2;                                 ➔1 mark

        }

        cout<<sum<<'\n';                                ➔1 mark

}
```